

AMENDMENTS TO THE CLAIMS

Please cancel claims 1-24, and add new claims 25-46, as follows:

Claims 1-24 (Cancelled).

Claim 25 (New) A method of treating a surface of a paper selected from the group consisting of a coated paper and a sized paper, wherein said method comprises:

coating the surface of the paper with composite particles comprising a polymer and at least one finely divided inorganic solid in the form of finely divided inorganic solid particles having a weight average particle diameter of  $\leq 100$  nm.

Claim 26 (New) The method according to claim 25, wherein the surface of the paper is coated with an aqueous composite particle dispersion comprising the composite particles.

Claim 27 (New) The method according to claim 26, wherein the aqueous composite particle dispersion is produced by a process of polymerizing at least one ethylenically unsaturated monomer by free-radical aqueous emulsion polymerization with at least one free-radical polymerization initiator in the presence of at least one finely divided inorganic solid and at least one dispersant, wherein said process comprises:

dispersing the at least one finely divided inorganic solid in an aqueous solution to produce an aqueous solid particle dispersion having finely divided inorganic solid particles dispersed therein,

wherein the aqueous solid particle dispersion has an initial solids concentration of  $\geq 1$  wt. %, based on a total weight of the aqueous solid particle dispersion, wherein  $> 90$  wt. % of the finely divided inorganic solid particles remain in dispersed form one hour after producing

the aqueous solid particle dispersion, wherein the finely divided inorganic solid particles have a weight average particle diameter of  $\leq 100$  nm, and wherein the finely divided inorganic solid particles exhibit a nonzero electrophoretic mobility in an aqueous standard potassium chloride solution at a pH corresponding to that of the aqueous solid particle dispersion prior to the addition of the at least one dispersant;

adding the at least one dispersant to the aqueous solid particle dispersion to produce a stable aqueous dispersion prior to the addition of the at least one ethylenically unsaturated monomer,

wherein the dispersant is at least one dispersant is selected from the group consisting of anionic dispersants, cationic dispersants and nonionic dispersants;

adding the at least one free-radical polymerization initiator and 0.01-30 wt. % of a total amount of the at least one ethylenically unsaturated monomer to the stable aqueous dispersion to produce an aqueous emulsion polymerization reaction mixture;

polymerizing at least 90 % of the at least one ethylenically unsaturated monomer present within the aqueous emulsion polymerization reaction mixture; and

thereafter continuously adding during polymerization a remaining amount of the at least one ethylenically unsaturated monomer to the aqueous emulsion polymerization reaction mixture at a rate at which the at least one ethylenically unsaturated monomer is consumed to thereby produce the aqueous composite particle dispersion.

Claim 28 (New) The method according to claim 25, wherein the composite particles are coated on the surface of the paper in an amount of 0.1-100 g/m<sup>2</sup> of the paper.

Claim 29 (New) The method according to claim 25, wherein the paper is a coated paper.

Claim 30 (New) The method according to claim 25, wherein the paper is a sized paper.

Claim 31 (New) The method according to claim 25, wherein the finely divided inorganic solid is at least one finely divided inorganic solid selected from the group consisting of silica, alumina, hydrated aluminum oxide, calcium carbonate, magnesium carbonate, calcium orthophosphate, magnesium orthophosphate, iron(II) oxide, iron(III) oxide, iron(II/III) oxide, tin oxide, cerium dioxide, yttrium(III) oxide, titanium dioxide, hydroxyapatite, zinc oxide and zinc sulfide.

Claim 32 (New) The method according to claim 25, wherein the polymer forms a film on the surface of the paper.

Claim 33 (New) The method according to claim 25, wherein said method further comprises, after said coating:

subjecting the paper to a pressure and/or a temperature such that the polymer forms a film on the surface of the paper.

Claim 34 (New) A paper produced by the method according to claim 15.

Claim 35 (New) A method of printing paper comprising:

printing the paper according to claim 34 in an offset flexographic and gravure printing process.

Claim 36 (New) A printed paper produced by the method according to claim 35.

Claim 37 (New) A method of treating a surface of a paper selected from the group consisting of a coated paper and a sized paper, wherein said method comprises:

coating the surface of the paper with an aqueous dispersion comprising a mixture of an aqueous polymer dispersion and at least one finely divided inorganic solid in the form of finely divided inorganic solid particles having a weight average particle diameter of  $\leq 100$  nm.

Claim 38 (New) The method according to claim 37, wherein the mixture is coated on the surface of the paper in an amount of  $0.1-100 \text{ g/m}^2$  of the paper.

Claim 39 (New) The method according to claim 37, wherein the paper is a coated paper.

Claim 40 (New) The method according to claim 37, wherein the paper is a sized paper.

Claim 41 (New) The method according to claim 37, wherein the finely divided inorganic solid is at least one finely divided inorganic solid selected from the group consisting of silica, alumina, hydrated aluminum oxide, calcium carbonate, magnesium carbonate, calcium orthophosphate, magnesium orthophosphate, iron(II) oxide, iron(III) oxide, iron(II/III) oxide, tin oxide, cerium dioxide, yttrium(III) oxide, titanium dioxide, hydroxyapatite, zinc oxide and zinc sulfide.

Claim 42 (New) The method according to claim 37, wherein a polymer of the aqueous polymer dispersion forms a film on the surface of the paper.

Claim 43 (New) The method according to claim 37, wherein said method further comprises, after said coating:

subjecting the paper to a pressure and/or a temperature such that a polymer of the aqueous polymer dispersion forms a film on the surface of the paper.

Claim 44 (New) A paper produced by the method according to claim 37.

Claim 45 (New) A method of printing paper comprising:

printing the paper according to claim 44 in an offset flexographic and gravure printing process.

Claim 46 (New) A printed paper produced by the method according to claim 45.